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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,861	05/05/2005	Sandrine Touchais	28944/40152	7889

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EXAMINER	
PERILLA, JASON M	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/533,861	TOUCHAIS ET AL.	
	Examiner	Art Unit	
	Jason M. Perilla	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *5-7 and 12-16* is/are withdrawn from consideration.

5)☒ Claim(s) *2 and 9* is/are allowed.

6)☒ Claim(s) *1,3,4,8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16 are pending in the instant application.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on August 15, 2005 is in compliance with the provisions of 37 CFR § 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

3. Claims 5-7, and 12-16 are objected to under 37 CFR § 1.75(c) as being in improper form because a multiple dependent claim can not depend upon another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Bauder et al (U.S. Pat. No. 7203247; "Bauder") in view of Schrader et al (U.S. Pat. No. 7016431; "Schrader")

Regarding claim 1, Bauder discloses, according to figure 2, a method of training a device (290, 225) for linearizing a radiofrequency amplifier (260) which is included within a radiofrequency transmitter (205) of a first equipment (200) of a

radiocommunication system (abstract), which transmitter is adapted for transmitting bursts, each burst comprising symbols belonging to a determined alphabet of symbols ("QAM" modulation symbols; col. 4, line 16), the method comprising the steps consisting in: a) generating a linearization training sequence (col. 5, lines 15-21, col. 6, lines 23-40; table 1) comprising a determined number N of symbols (see table 1), where N is a determined integer; b) transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the latter (i.e. during "training mode"; col. 5, lines 15-20); c) comparing the linearization training sequence transmitted (returned on a path from the "coupler") with the linearization training sequence generated (figure 2, "I,Q") so as to teach said linearization device (col. 7, line 28 - col. 9, line 25), characterized in that, in step b), the linearization training sequence is included in a sequence of symbols that is further designed to allow the adjusting of parameters of the transmission chain between said first equipment and a second equipment of the radiocommunication system (not shown; implied/inherent) with which said first equipment communicates. Bauder does not explicitly disclose the second equipment or receiver. However, for the utility of Bauder's transmitter 200, a receiver to receive its transmission is implied or inherent in Bauder's disclosure. In Bauder's embodiment, when the transmitter is in "training mode", it transmits one of the predetermined training sequences disclosed in table 1. It uses a coupled version of the transmission of such training sequence, in conjunction with training circuit 290, to update the lookup table 225 which reverses the non-linear properties of the power amplifier 260. It is evident from Bauder's disclosure that the training sequence, when fed into the transmitter, is

transmitted. Further, as broadly as claimed, the sequence of training symbols is "designed to allow the adjusting of parameters of the transmission chain between said first equipment and a second equipment" because parameters of Bauder's transmitter 200 are adjusted. That is, Bauder's transmitter is part of "the transmission chain" and the "adjusting of parameters" is the adjustment in the predistorter 220.

Further regarding claim 1, Bauder discloses, as broadly as claimed, transmitting bursts of QAM symbols but does not disclose that the bursts are determined according to a frame structure. However, Schrader evidences, in strictly analogous art, the notoriously known use of frames (fig. 2). It would have been obvious to one having ordinary skill in the art at the time which the invention was made that the transmitter of Bauder may utilize a frame structure of QAM symbols as suggested by Schrader because the use of frames is ubiquitous in the art.

Regarding claim 3, Bauder in view of Schrader disclose the limitations of claim 1 as applied above. Bauder discloses that the linearization training sequence may comprise 10, 20, 30, or 40 "chips" (table 1). Bauder does not disclose what relationship exists between such training sequences and the remaining burst(s) being transmitted. However, the linearization training sequence is considered to occupy only a part of the burst in which it is transmitted because it is not the only information being transmitted by Bauder's transmitter. That is, the claim imparts no particular limitation defining a "burst". Therefore, as broadly as claimed, Bauder's transmission of a training sequence is only a "part" of a wider "burst" comprising the training sequence any actual information to be transmitted.

Regarding claim 4, Bauder in view of Schrader disclose the limitations of claim 3 as applied above. Further, the remaining limitations of the claim as disclosed as applied to Claim 3 above. Depending upon the amount of actual data to be transmitted, Bauder's training sequence may constitute 5% of the total information transmitted.

Regarding claim 8, Bauder in view of Schrader disclose the limitations of the claim as applied to claim 1 above.

Regarding claim 10, Bauder in view of Schrader disclose the limitations of claim 8 as applied above. Further, Bauder in view of Schrader disclose the remaining limitations of the claim as applied to claim 3 above.

Regarding claim 11, Bauder in view of Schrader disclose the limitations of claim 8 as applied above. Further, Bauder in view of Schrader disclose the remaining limitations of the claim as applied to claim 4 above.

Allowable Subject Matter

5. Claims 2 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M. Perilla
January 15, 2008

jmp

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER